

## AMENDMENT

### Listing of the Claims:

The following listing of the claims replaces all prior versions and listings of the claims in the application.

1. (Currently Amended) A signaling aptamer comprising:  
an RNA nucleic acid binding species (aptamer) having a nucleotide sequence including a random insert of ~~fifty-one~~ nucleotides, wherein an A:C:G:U mole ratio of amounts of each nucleotide in said random insert is skewed such that ~~the amounts of three of four nucleotides are about equal and substantially comprise a total amount of all nucleotides in said random insert~~ one of the four nucleotides is poorly represented relative to the other three nucleotides in said random insert and occurs 1 to 3 times in said random insert; and  
one or more reporter molecule(s); wherein said reporter molecule(s) labels the ~~fourth~~ poorly represented nucleotide.
2. (Currently Amended) The signaling aptamer of claim 1, wherein said nucleotide sequence ~~has~~ is transcribed from the sequence shown in SEQ ID NO: 1.
3. (Original) The signaling aptamer of claim 1, wherein the skewed mole ratio of the random insert of said nucleotides is 3:3:2:0.38. A:C:G:U.
4. (Currently Amended) The signaling aptamer of claim 3, wherein the random insert of ~~fifty-one~~ nucleotides has a sequence selected from the group consisting of SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, and SEQ ID NO: 7.
5. (Currently Amended) The signaling aptamer of claim 1, wherein said ~~fourth~~ poorly represented nucleotide is a chemically modified nucleotide.
6. (Original) The signaling aptamer of claim 1, wherein the reporter molecule comprises one or more fluors or molecules that modulate the properties of said fluors.

7. (Original) The signaling aptamer of claim 6, wherein the fluor is a fluorescent dye.
8. (Currently Amended) The ~~method~~signaling aptamer of claim 7, wherein the fluorescent dye is fluorescein, Cascade Blue, Texas Red or Rhodamine Green.
9. (Original) The signaling aptamer of claim 8, wherein the fluorescent dye labels a uradine.
10. (Original) The signaling aptamer of claim 9, wherein the signaling aptamer is raf17-U61C, raf17-U52C, raf17s, raCB7b, or raRG7b.
11. (Original) The signaling aptamer of claim 1, wherein a ligand for said signaling aptamer is adenosine 5'-triphosphate.
12. (Currently Amended) A signaling aptamer comprising:  
an DNA nucleic acid binding species (aptamer) having a nucleotide sequence including a random insert of ~~fifty-one~~ nucleotides; wherein an A:C:G:T mole ratio of amounts of each nucleotide in said random insert is skewed such that ~~the amounts of three of four nucleotides are about equal and substantially comprise a total amount of all nucleotides in said random insert~~ one of the four nucleotides is poorly represented relative to the other three nucleotides in said random insert and occurs 1 to 3 times in said random insert; and  
one or more reporter molecule(s); wherein said reporter molecule(s) labels the ~~fourth~~ poorly represented nucleotide.
13. (Original) The signaling aptamer of claim 12, wherein said nucleotide sequence has the sequence shown in SEQ ID NO: 1.
14. (Original) The signaling aptamer of claim 12, wherein the skewed mole ratio of the random insert of said nucleotides is 3:3:2:0.38. A:C:G:T.
15. (Currently Amended) The signaling aptamer of claim 12, wherein said ~~fourth~~ poorly represented nucleotide is a chemically modified nucleotide.

16. (Original) The signaling aptamer of claim 12, wherein the reporter molecule comprises one or more fluors or molecules that modulate the properties of said fluors.
17. (Original) The signaling aptamer of claim 16, wherein the fluor is a fluorescent dye.
18. (Currently Amended) The ~~method~~signaling aptamer of claim 17, wherein the fluorescent dye is fluorescein, Cascade Blue, Texas Red or Rhodamine Green.
19. (Original) The signaling aptamer of claim 12, wherein a ligand for said signaling aptamer is adenosine 5'-triphosphate.